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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/083,180	05/22/1998	MARC FLEURY	612.36255X00	3669

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ANTONELLI, TERRY, STOUT & KRAUS, LLP
1300 NORTH SEVENTEENTH STREET
SUITE 1800
ARLINGTON, VA 22209-3873

EXAMINER

SHABMAN, MARK A

ART UNIT	PAPER NUMBER
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2856

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/083,180	Applicant(s) FLEURY ET AL.	
	Examiner MARK SHABMAN	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 1998.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8 is/are rejected.
- 7) ☒ Claim(s) 4-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 1998 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "9" and "12" have both been used to designate the arms as found on page 10 of the specification.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "9" has been used to designate both the tank and the arms as seen on page 10 of the specification. Likewise reference characters "2", "3", "4" and "5" have been used to designate the different features found in figures 1 and 2.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1 and 6.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

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any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 5-7 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

Regarding claim 2, the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleury US Patent 5,463,894 (hereinafter referred to as Fleury) in view of Cox US patent 3,693,435.

Regarding **claim 1**, Fleury discloses a device for determining properties such as porosity of a solid sample in the presence of two fluids of different densities (fluids A and B). In the case of Fleury, the two fluids are described as, for example, oil and water. Fleury provides rotatably movable equipment including at least one elongate vessel 2, with an inner cavity for placing the sample 1. The vessel as seen in figure 1 is fastened to an arm and secured to a fulcrum pin allowing for rotational movement about an axis. On the opposite side of the figure, a vessel of the same weight is provided as balancing means for the first vessel. A motor 13 is provided which drives the arm in rotation and creates a centrifugal force as claimed. Fleury further describes as seen in column 5, a system for forcing a displacement of fluid B within the system. Fleury describes a method of using acoustic means to follow the displacements of the interface between the two fluids in the vessel rather than a capacitive sonde as is claimed.

Cox discloses a method and device for taking fluid measurements such as a water-oil ratio within a system. Columns 3-4 of Cox describe a method of using a capacitive probe to determine the amounts of water and oil which the probe is in contact with. Cox further discloses that is common to use an acoustic measurement device to conduct the same measurements and as such It would have been obvious to one of ordinary skill in the art at the time of invention to have substituted the capacitive probe of Cox in place the acoustic measurement system of Fleury to achieve similar results.

As such, the apparatus would then be able to continuously follow the displacements of the two fluids within the vessel as claimed.

Regarding **claim 3**, Fleury discloses a measuring and control system 10 similar to that which is claimed.

Regarding **claim 8**, the control system 10 of Fleury is intended to control the fluid transfer of fluid B and to detect the displacements in the system. Fleury further states in column 5 that the pressures on either side are balanced by the control system, thus maintaining the interface at a determined level as claimed.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fleury in view of Cox as applied to claim 1 above, and further in view of Sutton US Patent 4,316,174 (hereinafter referred to as Sutton).

Regarding **claim 2**, while Cox discloses a capacitive sensor, it does not explicitly describe the dielectric coating as claimed. Capacitive sensors like that described are known in the art and an example can be seen in the Sutton reference in which the capacitive electrode comprises a dielectric polyethylene coating capable of measuring a capacitive variation as claimed. It would have been obvious to one of ordinary skill in the art at the time of invention to have used such a sonde in the claimed invention to provide an accurate means of measuring the fluid components within the vessel via a simple probe device.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK SHABMAN whose telephone number is (571) 272-8589. The examiner can normally be reached on 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hezron Williams/

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/M. S./
Examiner, Art Unit 2856